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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,277	04/01/2004	Swei Mu Wang	4317EL	2280
7590	07/06/2006		EXAMINER	
Charles E. Baxley, ESQ 90 John Street - 3rd Floor New York, NY 10038			MUSSER, BARBARA J	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/817,277

Applicant(s)

WANG, SWEI MU

Examiner

Barbara J. Musser

Art Unit

1733

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/1/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 12-15, it is unclear whether the material is intended to be a mix of the polymers, at least one of the polymers, or a copolymer of the materials listed. For the purposes of examination, this is considered to require a mixture of the two polymers.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irion et al.(U.S. Patent 2,714,571) in view of Funaki et al.(U.S. Patent 5,833,792).

Irion et al. discloses a method of bonding a textile carrier to a polymer by applying the fabric(10) to a carrying roller(12), extruding a polymer(17) downwardly onto the fabric at a nip between a cooled lamination roller(13) and the carrying roller, and compressing the polymer and fabric together, wherein the fabric is not completely

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penetrated by the polymer.(Figure 2) The reference does not disclose extruding the polymer onto the surface of the lamination roller prior to contacting the fabric at the nip. Funaki et al. discloses extruding a polymer film onto another polymer film by contacting it with the second film before the nip(Figure 1), extruding it into the nip(Figure 2), or contacting the extruded material with the lamination roller(13; Figure 4) before reaching the nip. It would have been obvious to one of ordinary skill in the art at the time the invention was made to contact the extruded polymer with the lamination roller prior to entering the nip since Funaki et al. shows this is a well-known alternative to extruding into the nip and since this would allow the angle at which the polymer and fabric meet to be controlled.(Col. 2, ll. 14-24) This process is used to make artificial leather.(Col. 1, ll. 58)

Regarding claim 2, while the references cited above do not disclose moving the carrying roller relative to the lamination roller, Funaki et al. does disclose moving the two rollers(Figures 1 and 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the rollers movable relative to one another to modify the amount of the lamination roller the polymer is on before it enters the nip.

Regarding claims 3 and 6, Funaki et al. discloses changing the position of the extruder so that the polymer can be extruded at direction locations.(Figures 1, 2, and 4) One in the art would appreciate that this would suggest the movement of the extruder relative to the lamination roller so that the polymer would cover more or less of the surface of the lamination roller since Funaki et al. suggests moving the extruder.

Regarding claims 4 and 5, Irion et al. discloses cooling the lamination roller using a coolant.(Col. 2, ll. 17-21)

Regarding claim 7, one in the art would appreciate that the speed of the roller could be varied as is well-known in the art to vary the length of time the film is cooled on the roller.

Regarding claim 10, while the references do not disclose a lamination distance of less than 89 degrees, one in the art would appreciate that the amount of distance spent on the lamination roller would be dependent on the desired amount of cooling and the desired length of time pressure is applied, and would appreciate that this could be any distance such as one less than 89 degrees. This can be determined by routine experimentation and is within the purview of one in the art.

Regarding claim 11, polyethylene is a thermoplastic.(title)

Regarding claims 12-15, while this reference is directed to bonding polyethylene films to fabric, one in the art would appreciate that the same process could also be used to bond other polymers used in the making of artificial leather to fabric such as mixtures of thermoplastic urethane with other materials. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the polyethylene of Irion et al. with other materials know to be used to make artificial leather since one in the art would appreciate that this method could be used to make other types of artificial leather based on other polymers.

5. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irion et al. and Funaki et al. as applied to claim 1 above, and further in view of Wevers et al.(U.S. Publication 2005/0106965A1).

The references cited above do not disclose the polymer containing a foaming agent. Wevers et al. discloses making artificial leather(Abstract) wherein one of the layers is made by foaming a polymer as it is extruded.[0074] It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a foaming agent into the polymer of Irion et al. and Funaki et al. since Wevers et al. discloses such is know and since foaming the polymer would make the leather porous, which would improve its suitability for leather since leather is microporous.

Regarding claim 9, a layer than it is foamed is often porous. Additionally, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the polymer porous since it is well-known in the leather arts that leather is porous and therefore the artificial leather would more closely resemble real leather.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)-272-1226. The fax phone

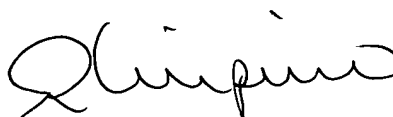
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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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